

Hydrology Success Standard for WSDOT Wetland Mitigation Sites in Washington

WSDOT would like to establish the following hydrology success standard and performances measures for most of its wetland mitigation sites.

Final Success Standard – final level of evaluation

WSDOT will delineate mitigation sites after five years to verify the presence of wetland hydrology. Delineations will be completed in the spring to best evaluate wetland hydrology.

Intermediate Performance Measures – adaptive management guides

- WSDOT will continue to monitor water levels before and after construction of the mitigation site.
- WSDOT will continue to use indicators of wetland hydrology identified in the Washington State Wetlands Identification and Delineation Manual (Ecology 1997) to qualitatively evaluate the presence of wetland hydrology.

WSDOT staff believes that wetland delineation is the most reliable, accurate, and consistent success standard of wetland hydrology for mitigation sites. By definition and verified by delineation, wetland creation includes the establishment of wetland hydrology. Delineation during the spring allows for effective evaluation of the hydrology component of the three-parameter delineation method. The wetland delineation method is both consistent and reliable, and is frequently and consistently used by both WSDOT and agency staff.

WSDOT staff believe shallow groundwater monitoring provides useful data, but is not as reliable as using wetland delineation to assure the presence of wetland hydrology. Monitoring well data can be difficult to interpret because of abnormal seasonal weather patterns, sampling protocol, or data collection in relation to weather events. When rainfall is out of the normal range, monitoring data may be of little use and additional monitoring may be necessary, the added monitoring can add significant time, effort and cost to projects. Monitoring well data, taken at weekly or monthly intervals, are difficult to interpret if they correspond with or miss key rainfall events. Plus, well location, well depth, subsurface geology and soil structure can complicate well data interpretation. WSDOT prefers the more reliable delineation methodology that is not subject to a potentially high level of interpretation to define the final success standard for a mitigation site.